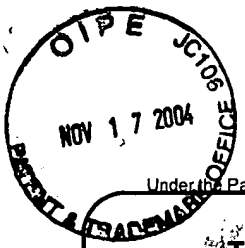
11-19-04

IFW



PTO/SB/21 (03-03)
Approved for use through 04/30/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	10/688,439
Filing Date	October 16, 2003
First Named Inventor	Doan et al.
Art Unit	2812
Examiner Name	Unknown
Attorney Docket Number	MI22-2416

Total Number of Pages in This Submission

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☑ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Response to Missing Parts/ Incomplete Application
  - ☐ Response to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
- ☐ After Allowance Communication to a Technology Center (TC)
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☑ Other Enclosure(s) (please Identify below):
  Return Receipt Postcard; Form PTO-1449; Cited References

Remarks

EV372470863

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual	Mark S. Matkin, Reg. No. 32,268 Wells St. John, P.S.
Signature	
Date	11/17/04

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231 on this date: express

Typed or printed	Jim Tidrick		
Signature		Date	11-17-04

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, Washington, DC 20231.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Serial No. 10/688,439
Filing Date ..... October 16, 2003
Inventor ..... Trung Tri Doan et al.
Assignee ..... Micron Technology, Inc.
Group Art Unit 1765
Examiner ..... Unknown
Attorney's Docket No. MI22-2416
Title: ..... Methods of Forming Trench Isolation Regions

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

References –See Attached Form PTO-1449

The Examiner's attention is directed to the reference which is listed on the attached Form PTO-1449, a copy of which are attached. No admission is made regarding whether all the submitted references are prior art.

Citation of the referenced art is respectfully requested.

This Supplemental Information Disclosure Statement is being filed before the mailing date of a first Office Action, whichever occurs last. Therefore, no fee is believed to be required. However, in the event that a fee is required for filing this Supplemental Information Disclosure Statement, please charge the fee specified under 37 C.F.R. § 1.17(p) to Deposit Account No. 23-0925.

Respectfully submitted,

Dated: 11-17-04

By: _____

Mark S. Matkin
Reg. No. 32,268

EV372470863

Form PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. MI22-2416	SERIAL NO. 10/688,439
	LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)	APPLICANT: Trung Tri Doan et al.	
		FILING DATE October 16, 2003	GROUP 2812

U.S. PATENT DOCUMENTS

*Examiner's Initials		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	AA	5,105,253	04/1992	Pollock	357	49	
	AB	5,604,149	02/1997	Paoli et al.	437	67	
	AC	5,616,513	04/1997	Shepard	438	402	
	AD	5,786,263	07/1998	Perera	438	431	
	AE	5,895,255	04/1999	Tsuchiaki	438	427	
	AF	5,923,073	07/1999	Aoki et al.	257	501	
	AG	5,981,354	11/1999	Spikes et al.	438	424	
	AH	5,989,978	11/1999	Peidous	438	436	
	AI	6,033,961	03/2000	Xu et al.	438	295	

FOREIGN PATENT DOCUMENTS

EV372470863

		Document Number	Date	Country	Class	Subclass	Translation Yes	Translation No
	AJ	05-315441	11/1993	Japan				
	AK	06-334031	12/1994	Japan				
	AL	02/27063 A2	4/2002	WIPO (Gordon et al.)				

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)

	AM		Curtis et al, "APCVD TEOS: O3 Advanced Trench Isolation Applications", Semiconductor Fabtech, 9th Ed.,
			p. 241 - 247
	AN		George, S.M. et al., "Atomic layer controlled deposition of SiO_2 and Al_2O_3 using ABAB... binary reaction
			sequence chemistry", Applied Surface Science 82/83, Elsevier Science B.V., July 10, 1994, p. 460-467.
	AO		Morishita et al. "Atomic-layer chemical-vapor-deposition of silicon-nitride" , Applied Surface Science 112,
			Elsevier Science B.V., 1997, p. 198-204.

EXAMINER	DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. MI22-2416	SERIAL NO. 10/688,439
	LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)	APPLICANT: Trung Tri Doan et al.	
		FILING DATE October 16, 2003	GROUP 2812

U.S. PATENT DOCUMENTS

*Examiner's Initials		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	AA	6,090,675	07/2000	Lee et al.	438	301	
	AB	6,171,962	01/2001	Karlsson et al.	438	692	
	AC	6,187,651	02/2001	Oh	438	435	
	AD	6,191,002	02/2001	Koyanagi	438	431	
	AE	6,300,219	10/2001	Doan et al.	438	424	
	AF	6,326,282	12/2001	Park et al.	438	424	
	AG	6,329,266	11/2001	Hwang et al.	438	424	
	AH	6,355,966	03/2002	Trivedi	257	499	
	AI	6,583,060	06/2003	Trivedi	438	700	

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	AJ			EV372470863				
	AK							
	AL							

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)

	AM		Yokoyama et al. "Atomic layer controlled deposition of silicon nitride and in situ growth observation by infrared
			reflection absorption spectroscopy", Applied Surface Science 112, Elsevier Science B.V., 1997, p. 75-81.
	AN		Gasser et al., "Quasi-monolayer deposition of silicon dioxide", Elsevier Science S.A., 1994, p. 213-218.
	AO		Shareef et al., "Subatmospheric chemical vapor deposition ozone/TEOS process for SiO_2 trench filling",
			J. Vac. Sci. Technol. B 13(4), Jul/Aug 1995, p. 1888-1892.
EXAMINER			DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. MI22-2416	SERIAL NO. 10/688,439
	LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)	APPLICANT: Trung Tri Doan et al.	
		FILING DATE October 16, 2003	GROUP 2812

U.S. PATENT DOCUMENTS

*Examiner's Initials		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	AA	6,448,150	09/2002	Tsai et al.	438	427	
	AB	6,617,251	09/2003	Kamath et al.	438	691	
	AC	6,719,012	4/2004	Doan et al.			
	AD	6,583,028	6/2003	Doan et al.			
	AE	6,534,395 B1	10/2001	Werkhoven et al.			
	AF	2001/0006255 A1	07/2001	Kwon et al.	257	751	
	AG	2001/0006839 A1	07/2001	Yeo	438	435	
	AH	2001/0046753 A1	11/2001	Gonzalez et al.	438	424	
	AI	2002/0004284 A1	01/2002	Chen	438	427	

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	AJ			EV372470863				
	AK							
	AL							

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)

	AM		Disclosed Anonymous 32246, "Substrate Contact with Closed Bottom Trenches", Research Disclosure, Feb.
			1991, 1 page.
	AN		Hausmann et al., *Rapid Vapor Deposition of Highly Conformal Silica Nanolaminates*, 298 SCIENCE 402-406
			(October 11, 2002)
	AO		Miller et al., *Self-limiting chemical vapor deposition of an ultra-thin silicon oxide film using tri-(tert-butoxy) Silanol*, 397 THIN SOLID FILMS 78-82 (2001).

EXAMINER	DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. MI22-2416	SERIAL NO. 10/688,439
	LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)	APPLICANT: Trung Tri Doan et al.	
		FILING DATE October 16, 2003	GROUP 2812

U.S. PATENT DOCUMENTS

*Examiner's Initials		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	AA	10/931,524		Sandhu			08/31/2004
	AB	10/615,051		Vaartstra			07/07/2003
	AC	10/655,699		Derderian et al.			09/05/2003
	AD	10/806,923		Li et al.			03/22/2004
	AE						
	AF						
	AG						
	AH						

EV372470863

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	AI							

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)

	AJ		Hausmann et al., "Catalytic vapor deposition of highly conformal silica nanolaminates", Department of
			Chemistry and Chemical Biology, Harvard University, May 14, 2002, pp. 1-13.
	AK		Klaus et al., *Atomic Layer Deposition of SiO_2 Using Catalyzed and Uncatalyzed Self-Limiting Surface*
			Reactions, 6 SURFACE REVIEW AND LETTERS, Nos. 3 and 4, pp. 435-448 (1999).
	AL		
	AM		

EXAMINER	DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.